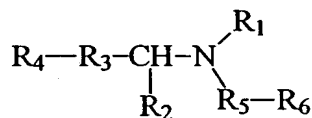


CLAIMS

What is claimed is:

1. A method for increasing survival of oligodendrocytes, comprising administering an effective amount of a deprenyl compound to a patient such that survival of oligodendrocytes is increased.

2. The method of claim 1, wherein the deprenyl compound is represented by the structure:



in which

10 R_1 is hydrogen, alkyl, alkenyl, alkynyl, aralkyl, alkylcarbonyl, arylcarbonyl, alkoxy carbonyl, or aryloxy carbonyl;

R_2 is hydrogen or alkyl;

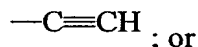
R_3 is a single bond, alkylene, or $-(\text{CH}_2)_n-\text{X}-(\text{CH}_2)_m$;

in which X is O, S, or N-methyl; m is 1 or 2; and n is 0, 1, or 2;

R_4 is alkyl, alkenyl, alkynyl, heterocyclyl, aryl or aralkyl; and

15 R_5 is alkylene, alkenylene, alkynylene and alkoxylenylene; and

R_6 is C_3 - C_6 cycloalkyl or



R_2 and R_4 - R_3 are joined to form, together with the methine to which they are attached, a cyclic or polycyclic group;

20 and pharmaceutically acceptable salts thereof.

3. The method of claim 2, wherein R_1 is a group that can be removed *in vivo*.

4. The method of claim 2, wherein R_1 is hydrogen.

5. The method of claim 2, wherein R_1 is alkyl.

6. The method of claim 2, wherein R_1 is methyl.

25 7. The method of claim 2, wherein R_2 is methyl.

8. The method of claim 2, wherein R_3 is methylene.

9. The method of claim 2, wherein R_4 is aryl.

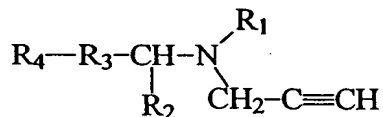
10. The method of claim 2, wherein R_4 is phenyl.

11. The method of claim 2, wherein R_5 is methylene.

30 12. The method of claim 2, wherein R_6 is



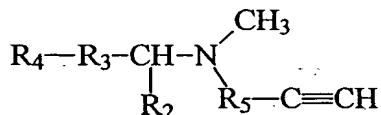
13. The method of claim 2, wherein the deprenyl compound is represented by the structure:



in which

- 5 R_1 is hydrogen, alkyl, alkenyl, alkynyl, aralkyl, alkylcarbonyl, arylcarbonyl, alkoxycarbonyl, or aryloxycarbonyl;
 R_2 is hydrogen or alkyl;
 R_3 is a bond or methylene; and
 R_4 is aryl or aralkyl; or
 R_2 and R_4-R_3 are joined to form, together with the methine to which they are attached,
 10 a cyclic or polycyclic group;
 and pharmaceutically acceptable salts thereof.

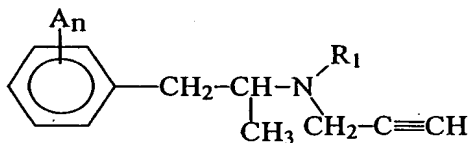
14. The method of claim 2, wherein the deprenyl compound is represented by the structure:



in which

- 15 R_2 is hydrogen or alkyl;
 R_3 is a bond or methylene; and
 R_4 is aryl or aralkyl; or
 R_2 and R_4-R_3 are joined to form, together with the methine to which they are attached,
 a cyclic or polycyclic group; and
 20 R_5 is alkylene, alkenylene, alkynylene and alkoxylyene;
 and pharmaceutically acceptable salts thereof.

15. The method of claim 2, wherein the deprenyl compound is represented by the structure:



in which

- 25 R_1 is hydrogen, alkyl, alkenyl, alkynyl, aralkyl, alkylcarbonyl, arylcarbonyl, alkoxycarbonyl, or aryloxycarbonyl;
 A is a substituent independently selected for each occurrence from the group consisting of halogen, hydroxyl, alkyl, alkoxy, cyano, nitro, amino, carboxyl, $-\text{CF}_3$, or azido;
 n is 0 or an integer from 1 to 5;
 30 and pharmaceutically acceptable salts thereof.

16. The method of claim 1, wherein said patient is a human.
17. The method of claim 1, wherein said deprenyl compound is (-)-desmethyldeprenyl.
18. A method for inhibiting Multiple Sclerosis, comprising administering to a patient an effective amount of a deprenyl compound such that Multiple Sclerosis is inhibited.
- 5 19. The method of claim 18, wherein said deprenyl compound is (-)-desmethyldeprenyl.
20. The method of claim 18, wherein said patient is a human.
21. A method for increasing oligodendrocyte survival *in vitro*, comprising contacting oligodendrocytes with an effective amount of a deprenyl compound such that oligodendrocyte survival is increased.
- 10 22. A method for increasing oligodendrocyte survival in a patient, comprising contacting an oligodendrocyte with a deprenyl compound such that oligodendrocyte survival increases.
23. The method of claim 22, wherein said patient is a human.
24. The method of claim 23, wherein the deprenyl compound is (-)-desmethyldeprenyl.
25. The method of claim 24, wherein the (-)-desmethyldeprenyl is administered
- 15 transdermally to the patient.